

## **REMARKS/ARGUMENTS**

### **1.) Claim Status**

Claims 15-22 are pending in the application. The Applicant has amended claims 15 and 19 to correct a minor informality. These minor amendments should not be used by the Examiner as a reason for refusing to consider and reply to the Applicant's request for explanations below. The Applicant is entitled to receive a thorough examination, with accurate citations and explanations of those areas of prior art references where the Examiner contends the claimed limitations are shown. To date, the Examiner has not provided valid reasoning for the rejection of the claims. It is not clear from the citations provided by the Examiner, what components or functionalities of Momona, Koch, and Richardson the Examiner is equating with the Applicant's claimed limitations. Explanation is respectfully requested.

### **2.) Claim Objections**

On page 2 of the Office Action, the Examiner objected to claims 15-22 due to informalities in independent claims 15 and 19. The Applicant has corrected the informalities as suggested by the Examiner. Therefore, the withdrawal of the objection to claims 15-22 is respectfully requested.

### **3.) Claim Rejections – 35 U.S.C. § 103(a)**

The Examiner rejected claims 15 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Momona (US 6,434,117) in view of Koch et al. (US 2006/0013247). The Applicant respectfully disagrees for the following reasons.

For this request for reconsideration, the Applicant will focus on claim 15, although the arguments are also applicable to independent claim 19. Each claimed limitation will be looked at in order.

1. *assigning a weight to each user associated with the arbiter node, wherein the weights indicate a percentage of an available bandwidth on the common link each user is provisionally allowed to use;*

The Examiner cites Momona, col. 9, lines 5-13. However, this passage only discloses that a source node 10A sends a session channel setup request to a multicast manager 10D for requesting the bandwidth desired by the destination node 10C. This is done by setting the control register 30 of manager 10D with the session data and the bandwidth data received with the reservation message from the destination node. If the request is granted, a reply packet is transmitted from the multicast manager to the source node where the control register 40 is set with the assigned channel number (step 1104). Even if it is assumed the Examiner is equating Momona's multicast manager with the Applicant's arbiter node, there is no disclosure of the step of assigning a weight to each user associated with the arbiter node. Explanation is respectfully requested.

2. *receiving at the arbiter node, a request to join a new multicast session from a first user;*

The Examiner cites Momona, col. 9, lines 5-13. This would seem to indicate that the Examiner is equating the multicast manager with the Applicant's arbiter node. Confirmation is respectfully requested.

3. *determining by the arbiter node, an actual bandwidth that the first user would utilize if the request to join the new multicast session is granted, wherein the actual bandwidth for the first user is calculated as the sum of the first user's bandwidth part of each currently ongoing session in which the first user is a participant plus the first user's bandwidth part of the new multicast session, wherein the first user's bandwidth part of any given session is calculated as the bandwidth required for the given session divided by the total number of users participating in the given session;*

The Examiner cites Koch, paragraph 0060, lines 1-14. This paragraph discloses that an individual ONT 38 may initially receive a unique packet stream from a corresponding OLT module 35 via unique source 33. The unique packet stream may be received at a constant rate by the individual ONT 38. The transmission rate may be a default rate set by the individual ONT 38 or the OLT module 35 or may be determined based on the available bandwidth capacity of the ONT 38 at the time the individual ONT

38 requested the stream. The individual ONT 38 may then select a second packet stream to receive. The second packet stream may be a common packet stream or a different unique packet stream. As an example, subscriber devices 39 connected to the individual ONT 38 may send an IGMPv2 join request to join a multicast group. The individual ONT 38 listens for the IGMPv2 join request and selects the common packet stream associated with the multicast group as previously described.

The only statement in this paragraph remotely related to the claimed limitation is that the transmission rate may be determined based on the available bandwidth capacity of the ONT 38 at the time the individual ONT 38 requested the stream. However, there is no disclosure whatsoever of the detailed process recited in the Applicant's claimed limitation for determining by the arbiter node, an actual bandwidth that the first user would utilize if the request to join the new multicast session is granted. Explanation is respectfully requested.

4. *determining by the arbiter node, an allowed bandwidth for the first user, wherein the allowed bandwidth for the first user is calculated as the available bandwidth on the common link multiplied by the weight assigned to the first user;*

The Examiner cites Momona, col. 10, lines 3-7. This passage discloses that a session setup request from the source node 10A is detected at step 1310. Since the resource reservation protocol is a receiver-oriented protocol, this request contains the bandwidth the destination node 10C is ready to receive as well as the session data. In response to this request, the multicast manager 10D proceeds to step 1311 to compare the bandwidth requested by the destination node with a value currently set in the bandwidth field of the corresponding entry of allocation table 20. However, there does not seem to be any disclosure of the Applicant's step of calculating the allowed bandwidth for the first user as the available bandwidth on the common link multiplied by the weight assigned to the first user. It cannot be found where Momona ever assigned any weights to each user in a multicast session. Explanation is respectfully requested.

5. *comparing by the arbiter node, the actual bandwidth for the first user with the allowed bandwidth for the first user;*

The Examiner cites Momona, col. 10, lines 3-7. This passage discloses that the multicast manager compares the bandwidth requested by the destination node with a value currently set in the bandwidth field of the corresponding entry of allocation table 20. However, there is no indication that the value set in the allocation table is computed in the manner claimed by the Applicant, i.e., calculating the allowed bandwidth for the first user as the available bandwidth on the common link multiplied by the weight assigned to the first user. Explanation is respectfully requested.

6. *granting the request when the actual bandwidth for the first user is less than or equal to the allowed bandwidth for the first user; and*

The Examiner cites Koch, paragraph 0060, lines 1-9. This passage discloses how the ONT 38 sets the transmission data rate. There does not seem to be anything related to the claimed limitation. Since there is no disclosure in Momona or Koch of the claimed process for determining the actual bandwidth that the first user would utilize if the request to join the new multicast session is granted, or of the process for determining an allowed bandwidth for the first user utilizing the weight assigned to the first user, then the Applicant's granting step based on those two criteria cannot be deduced. Explanation is respectfully requested.

7. *denying the request when the actual bandwidth for the first user is greater than the allowed bandwidth for the first user.*

The Examiner cites Koch, paragraph 0060, lines 1-9. This passage discloses how the ONT 38 sets the transmission data rate. There does not seem to be anything related to the claimed limitation. Since there is no disclosure in Momona or Koch of the claimed process for determining the actual bandwidth that the first user would utilize if the request to join the new multicast session is granted, or of the process for determining an allowed bandwidth for the first user utilizing the weight assigned to the first user, then the Applicant's denying step based on those two criteria cannot be deduced. Explanation is respectfully requested.

The Examiner rejected claims 16-18 and 20-22 under 35 U.S.C. § 103(a) as being unpatentable over Momona (US 6,434,117) in view of Koch et al. (US 2006/0013247) as applied to claim 15 or 19, and in further view of Richardson et al. (US 2006/0038877). The Applicant respectfully disagrees. The Applicant explained in the previous response filed September 8, 2009 that the time period referred to in Richardson is not the same time period claimed in the Applicant's invention. Richardson describes in paragraph 0204, a time reservation system employed to reserve time periods for using a videoconference system. Richardson creates a Quality of Service contract for the duration of the videoconference session. Once again, this is not what the Applicant's claims recite.

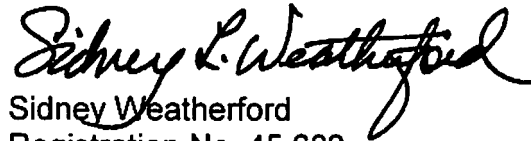
The Applicant's claims recite that when a user *leaves* a multicast session, the weight assigned to the user is temporarily increased for a predefined period of time. Thus, if the user tries to rejoin the session within the predefined period of time, the user is given priority. After the predefined period of time, the priority is removed. This is clearly different from the time period and process described in Richardson, which merely guarantees a QoS level for the duration of a videoconference. Thus, the Applicant's claims relate to a time period that the user is *out* of the session, and the time period in Richardson is when the user is *in* the session. Explanation is respectfully requested.

#### **4.) Conclusion**

The Applicant believes all of the claims currently pending in the Application are in condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 15-22.

The Applicant will request a telephone interview with the Examiner's SPE if an adequate examination cannot be otherwise achieved.

Respectfully submitted,

  
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